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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,237

08/22/2006

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EXAMINER

LEE, DORIS L

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,237	Applicant(s) SOYAMA ET AL.	
	Examiner Doris L. Lee	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20080902, 20070524, 20060822</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claim 8** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "...the inorganic particles contain particles". It is unclear if the 2nd recitation of the word particles refers to the silicon dioxide/aluminum oxide particles or a different set of particles. For the purpose of this office action, the the particles are taken to refer to the silicon dioxide/aluminum oxide particles as recited in claim 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-5, 8-10 and 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hwang et al (WO 99/37592)** in view of **Goodwin (US 3,331,671)**.

Regarding claims 1, 3-4 and 9-10 Hwang teaches a composition comprising a polycarbonate type resin (page 8, line 34) and fly ash particles (page 4, line 9) having a mean particle size of less than 10 microns (page 5, line 27).

Fly ash particles are generally 50 % silicon dioxide and 25 % aluminum oxide as evidenced by Goodwin (col. 4, lines 24-30).

While there is no disclosure that the resin is a flame-retardant resin as presently claimed, applicants attention is drawn to MPEP 2111.02 which states that "if the body of a claim fully and intrinsically sets forth all the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction". Further, MPEP 2111.02 states that statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the purpose or intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner's position that the preamble does not state any distinct definition of any of the claimed invention's limitations and further that the purpose or intended use, i.e. a flame retardant resin, recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art composition of modified Hwant and further that the prior art structure which is a composition identical to that set forth in the present claims is capable of performing the recited purpose or intended use.

Regarding claims 2 and 8, Hwang teaches that the amount of fly ash in the polycarbonate is between 20 phr to 500 phr by weight (page 9, lines 5-15).

Regarding claim 5, Hwang teaches that a coupling agent may be added to the filler surface to improve bonding between the filler surface and the matrix of the polymer (page 9, lines 15-20).

Regarding claims 12-13, Hwang teaches a flame retardant molding material and a molding article made from the composition according to Claim 1 (page 9, lines 32-38).

6. **Claims 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hwang et al (WO 99/37592)** in view of **Goodwin (US 3,331,671)**, **Chang (US 5,505,766)** and **Nomura et al (JP 2001-220193, see machine translation)**

The discussion regarding Hwang and Goodwin in paragraph 5 above is incorporated here by reference.

Regarding claims 5-7, Hwang teaches that the fly ash can be used in a polymeric resin as discussed in the rejection of claim 1 above. It is noted that Hwang

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teaches that fly ash, which is usually created as a byproduct of coal fired electrical power plants, can also be used as filler in roadways or concrete pavements (page 1, lines 9-15). As evidenced by Chang, fly ash contains heavy metal contaminants such as nickle, arsenic and chromium (col. 1, lines 20-25).

However, Hwang fails to teach the addition of an elution preventer such as ferrous sulfate monohydrate.

Kitano teaches a cement composition which uses refuse incineration ash as a raw material ([0002]) and has chromium which can contaminate the environment ([0003]) uses the monohydrate of ferrous sulfate as a elution preventer ([0007]).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the monohydrate of ferrous sulfate at taught by Kitano in the composition of modified Hwang. One would have been motivated to do so in order to receive the expected benefit of preventing the leeching of chromium from the fly ash in the composition into the environment (Kitano, [0002] and [0007]). They are combinable because they are both concerned with compositions containing fly ash. Absent objective evidence to the contrary and based upon teaching of the prior art, there would have been a reasonable expectation of success.

7. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hwang et al (WO 99/37592)** in view of **Goodwin (US 3,331,671)** and **Nodera et al (US 5,837,757)**.

The discussion regarding Hwang and Goodwin in paragraph 5 above is incorporated here by reference.

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Regarding claim 11, Goodwin teaches that the plastic matrix can include any plastic or elastomeric materials (page 7, lines 30-34) include polymers which are fluorinated (page 8, line 20-25), but fails to teach that the polymer matrix contains a fiber-formable fluorinated polymer in an amount of 0.05 to 5 weight % based on the total flame-retardant resin composition.

Nodera teaches a flame-retardant polycarbonate resin (Abstract) which uses a fibril-forming polytetrafluoroethylene in an amount from 0.01 to 1 part by weight relative to 100 parts by weight of the composition (col. 11, lines 20-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the fibril-forming polytetrafluoroethylene in an amount from 0.01 to 1 part by weight relative to 100 parts by weight of the composition as taught by Nodera in the composition of Goodwin. One would have been motivated in order to receive the expected benefit of having a dripping inhibitor (Nodera, col. 11, line 29-30). They are combinable because they are concerned with the same field of endeavor, namely polycarbonate resins. Absent objective evidence to the contrary and based upon teachings of the prior art, there would have been a reasonable expectation of success.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Doris L. Lee whose telephone number is (571)270-3872. The examiner can normally be reached on Monday - Thursday 7:30 am to 5 pm and every other Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Doris L Lee/
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796